

The Delicate Art of Tea Processing

Tea processing is a delicate process, one that has been passed on from generation to generation and takes years to master. All teas are produced from the same plant, *Camellia sinensis*, be it black tea, green tea, or even white tea. The difference lies only in terms of processing. So while lighter teas like white and green are less processed (and, hence, fresher tasting), black teas are highly processed, producing a stronger taste.

A general outline of the processing the teas undergo is as follows: oxidation of the leaves, stopping the oxidation process, tea forming or rolling, and drying. The oxidation process is what determines what type of tea is formed. From the lowest level of oxidation to the highest, the teas are placed- white tea, green tea, [oolong tea](#), and black tea.

While the correct processing of the tea is the biggest contributor to its final flavour, other factors like the type of cultivar of the tea bush, the quality of the plucked tea leaves, the manner and quality of the production processing they undergo, and the weather conditions are also determining factors.

Although each type of tea has different taste, smell, and visual appearance, tea processing for all tea types consists of a very similar set of methods with only minor variations. Without careful moisture and temperature control during its manufacture and life thereafter, fungi will grow on tea. This form of fungus causes real fermentation that will contaminate the tea and may render the tea unfit for consumption.

Plucking: Tea leaves and flushes which includes a terminal bud and two young leaves, are picked from *Camellia sinensis* bushes typically twice a year during early spring and early summer or late spring. Some teas may even have up to five flushes in a year, while some may have only two. For high quality teas, plucking is always done by hand. It is a labour intensive process but a machine plucked tea cannot provide the same delicacy in flavour.

Withering/ Wilting: The tea leaves will begin to wilt soon after picking, with a gradual onset of enzymatic oxidation. Withering is used to remove excess water from the leaves and allows a very slight amount of oxidation. The leaves can be either put under the sun or left in a cool breezy room to pull moisture out from the leaves. The process is also important in promoting the breakdown of leaf proteins into free amino acids and increases the availability of freed caffeine, both of which change the taste of the tea.

Disruption: Known in the Western tea industry as "disruption" or "leaf maceration", the teas are bruised or torn in order to promote and quicken oxidation. The leaves may be lightly bruised on their edges by shaking and tossing in a bamboo tray or tumbling in baskets. More extensive leaf disruption can be done by kneading, rolling, tearing, and crushing, usually by machinery.

Oxidation/Fermentation: For teas that require oxidation, the leaves are left on their own in a climate-controlled room where they turn progressively darker. This is accompanied by agitation in some cases. In this process the chlorophyll in the leaves is enzymatically broken down, and its tannins are released or transformed. This process is sometimes referred to as "fermentation" in the tea industry.

Fixation/Kill-green: Kill-green is done to stop the tea leaf oxidation at a desired level. This process is accomplished by moderately heating tea leaves, thus deactivating their oxidative enzymes and removing unwanted scents in the leaves, without damaging the flavour of the tea.

Sweltering/Yellowing: Unique to yellow teas, warm and damp tea leaves from after kill-green are allowed to be lightly heated in a closed container, which causes the previously green leaves to turn yellow.

Rolling/Shaping: The damp tea leaves are then rolled to be formed into wrinkled strips, by hand or using a rolling machine which causes the tea to wrap around itself. This rolling action also causes some of the sap, essential oils, and juices inside the leaves to ooze out, which further enhances the taste of the tea.

Drying: Drying can be done in many ways, including panning, sunning, air drying, or baking. Baking is usually the most common. Great care must be taken to not over-cook the leaves. The drying of the produced tea is responsible for many new flavour compounds particularly important in green teas.

Aging/Curing: While not always required, some teas require additional aging, secondary fermentation, or baking to reach their drinking potential.